Airbus Industrie Perspective On Data Sharing

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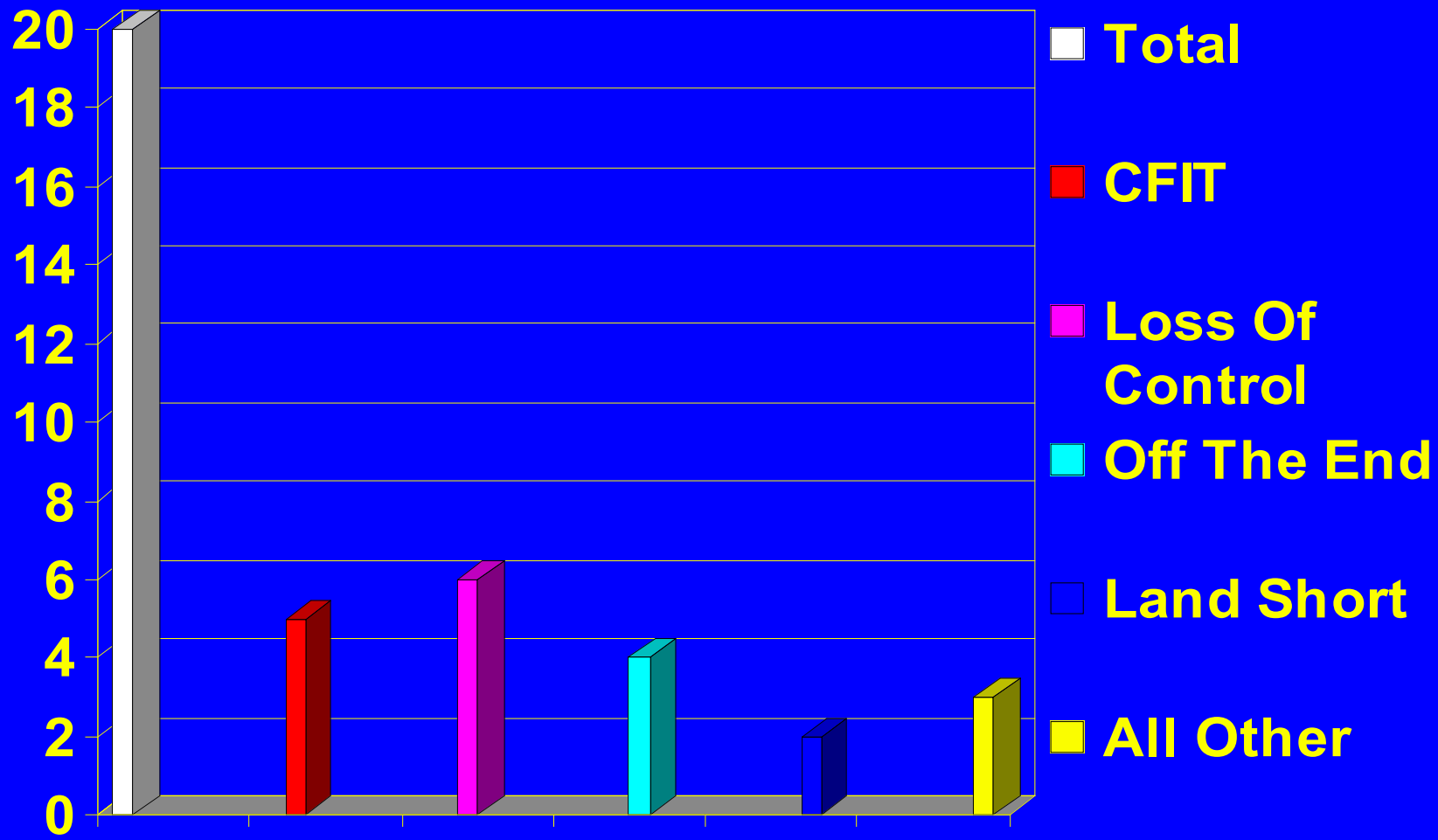
Director Flight Safety

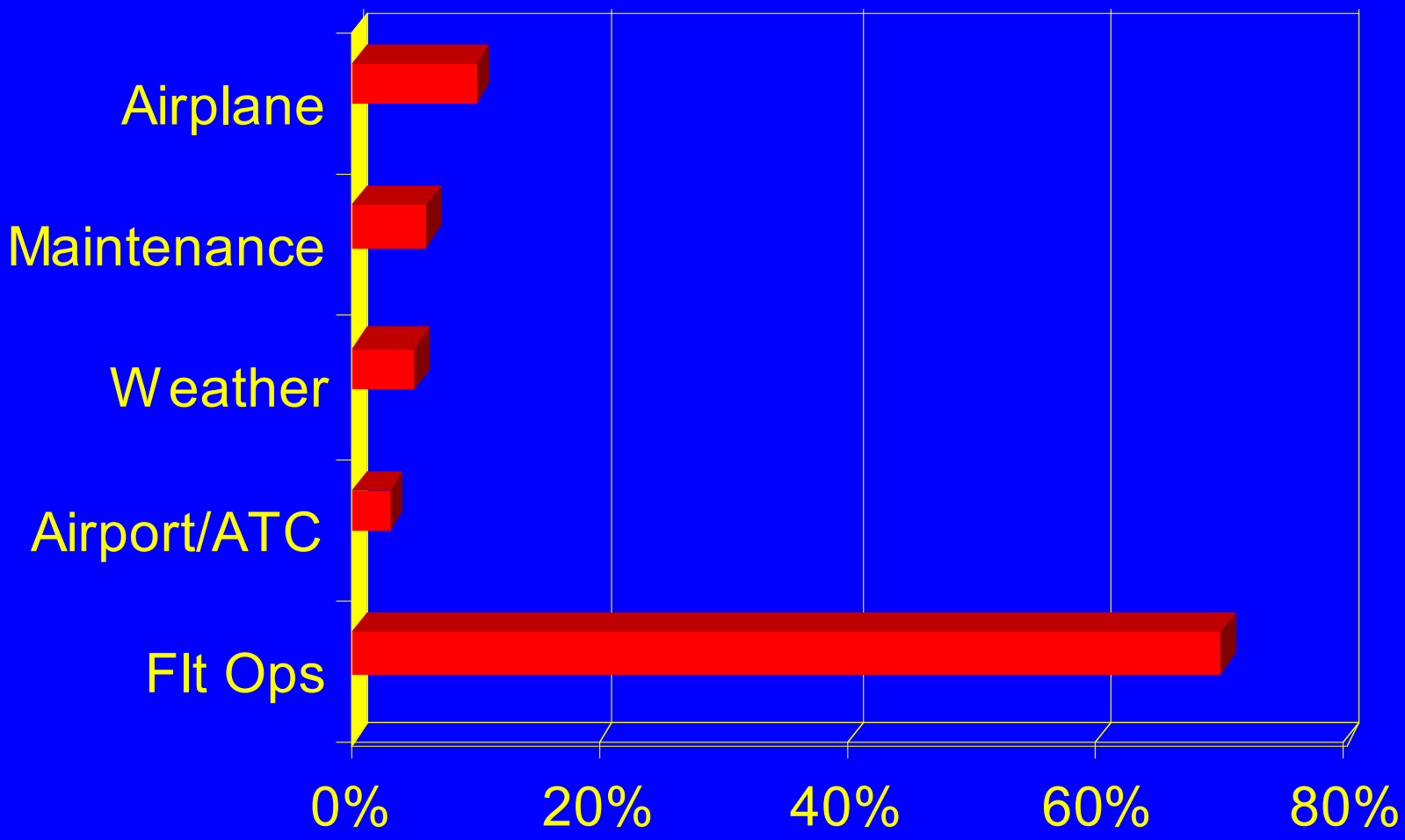
The Challenge

- The vast majority of all accidents can be classified in the four following categories :
  - CFIT.
  - Loss of control in flight.
  - Landing short.
  - Off the end of the runway.
    - On takeoff.
    - On landing.

Airbus Industrie Hull Losses

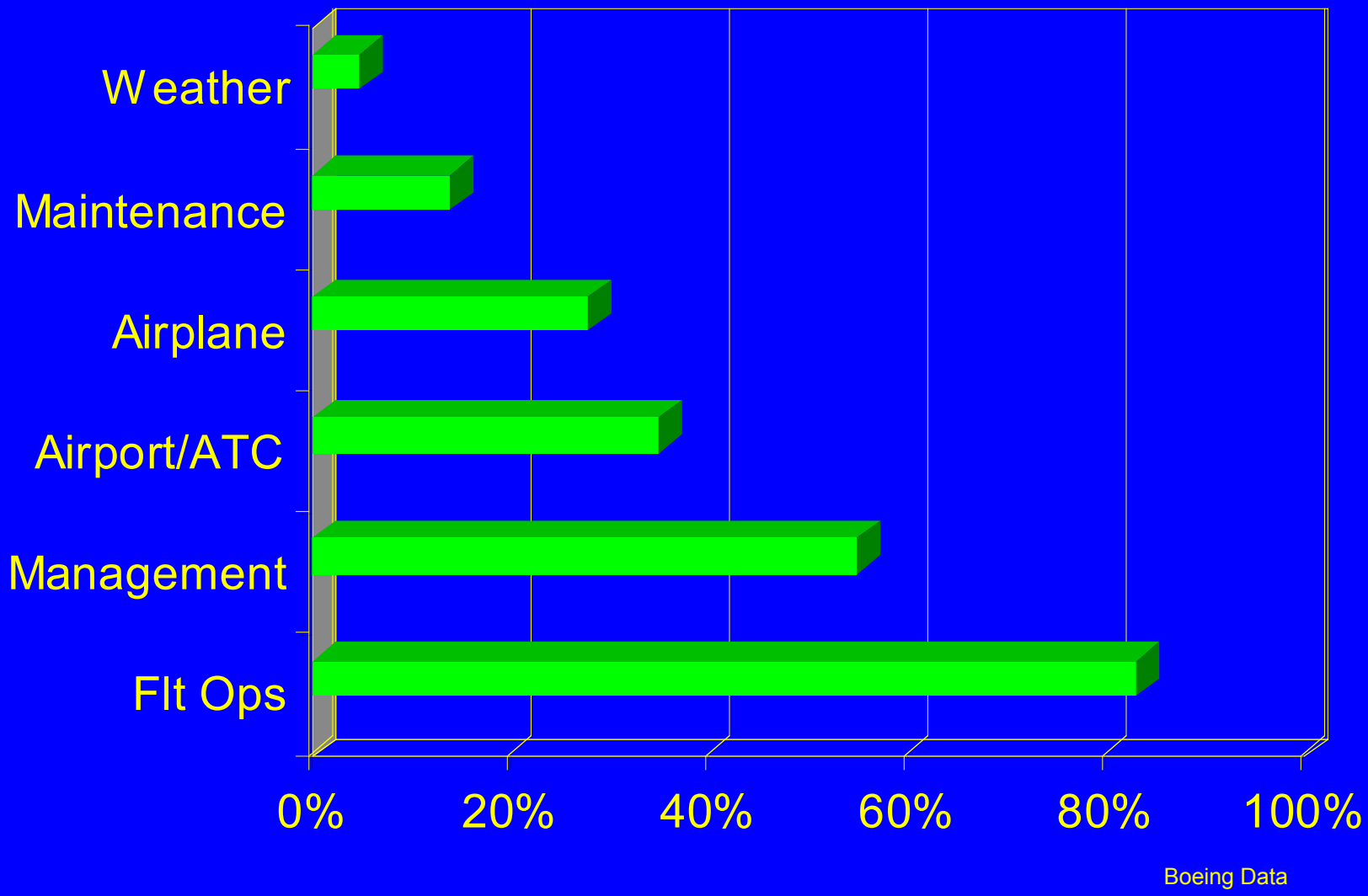


Primary Causes

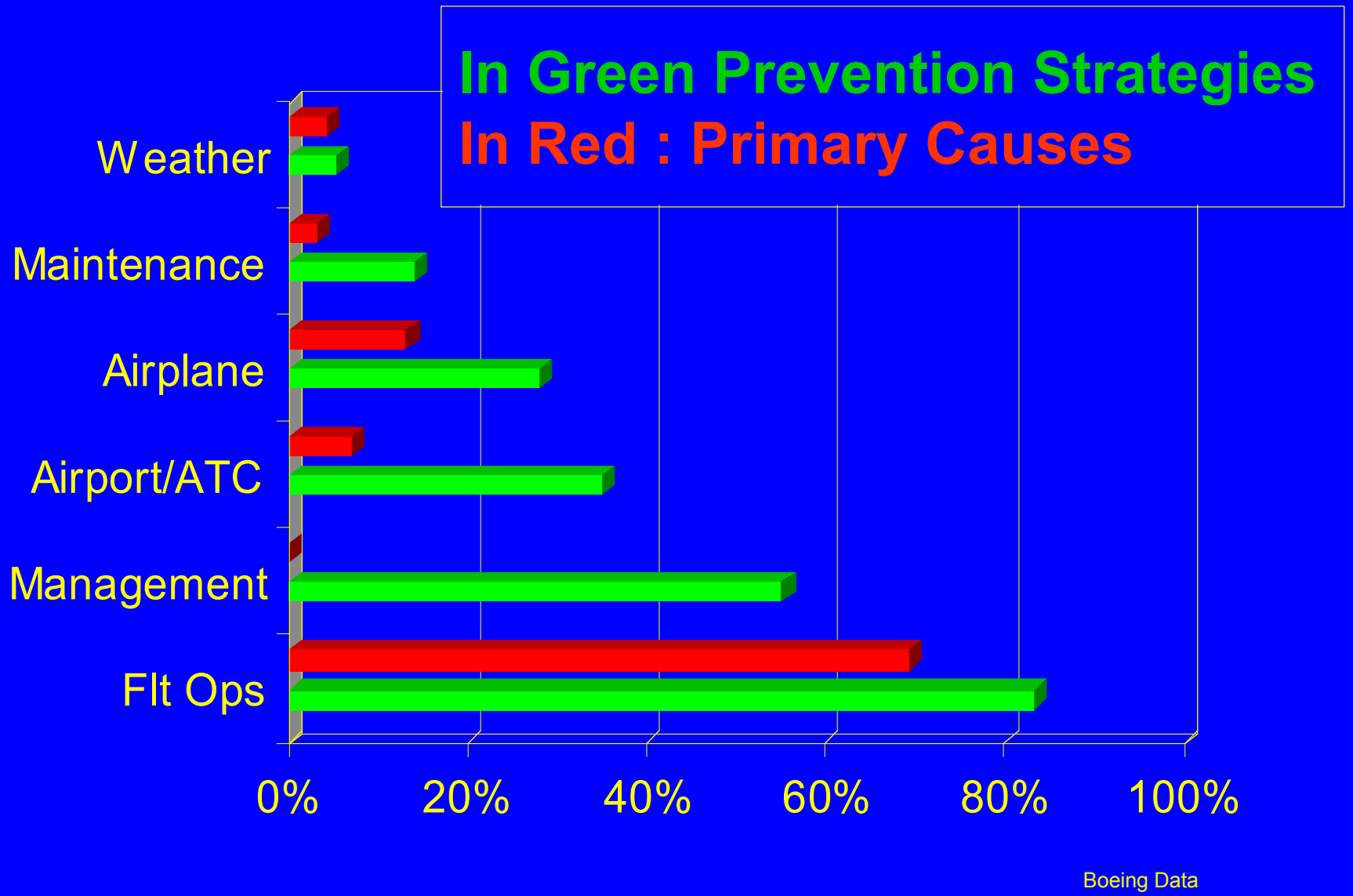


Boeing Data

Accident Prevention Strategies

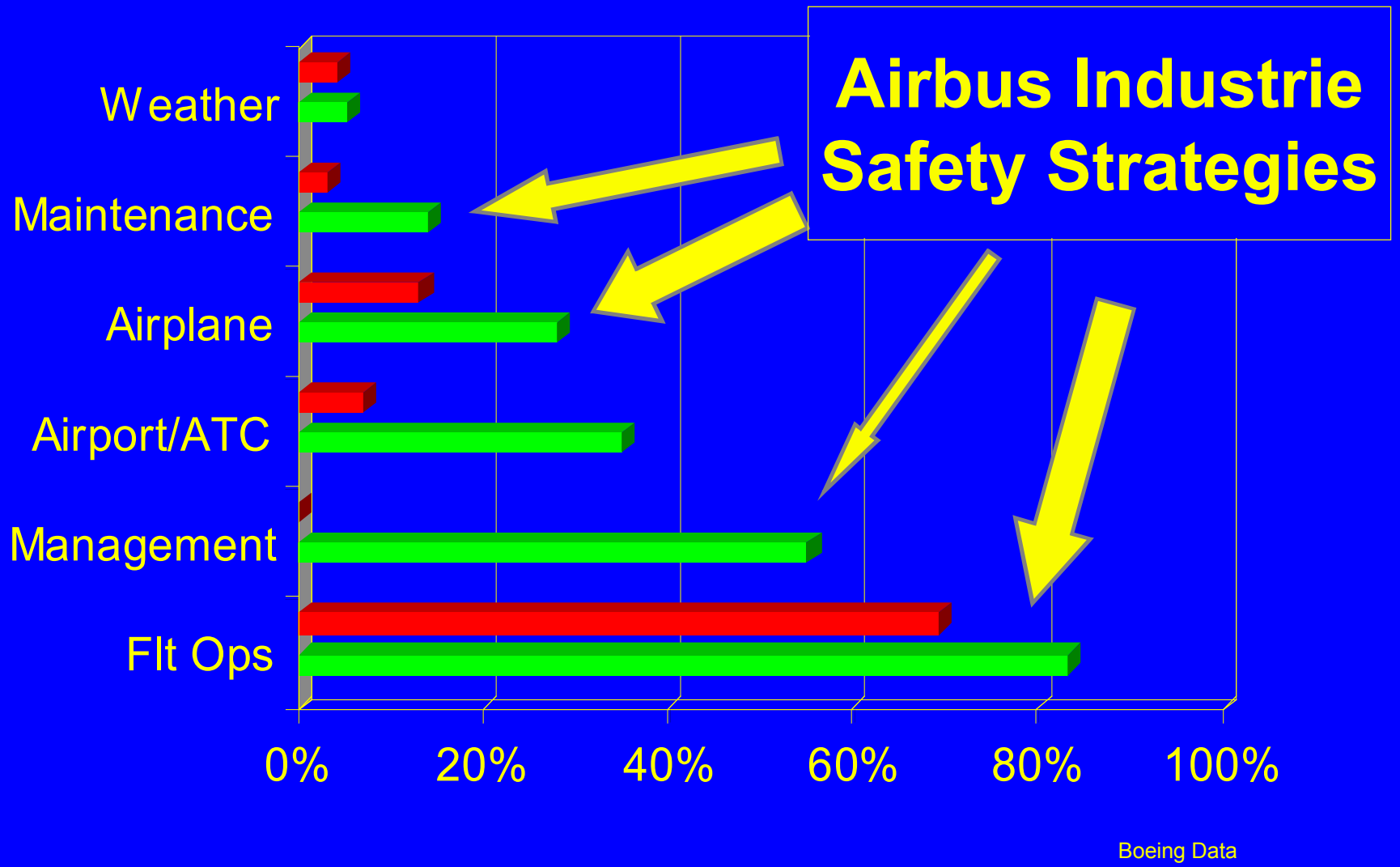


Accident Causes vs. Prevention Strategies



Boeing Data

Accident Causes vs. Prevention Strategies



Boeing Data

The Challenge

- If we can eliminate these types of accidents, there will be very few accidents in the future.
- I am convinced that we can significantly enhance safety in these areas
  - By developing appropriate safety strategies
  - By implementing them on a timely manner

Need To Share "Lessons Learned"

- However, to achieve this challenge :

➡ The operational aspects of these types of accidents need to be better understood.

- This requires better data about the significant operational events that occur in revenue service.

In An Ideal World ...

- In an ideal world (in Utopia), we can imagine that :
  - Pilots report all significant anomalies and mistakes.
  - Flight data is provided to fully analyse the event.
  - Analysis are shared and statistics are developed.
  - Information dissemination is quick and reliable.
  - Data bases are filled with consolidated data and appropriate taxonomy.
  - Design, procedures and training are frequently updated.

In Utopia ...

- There is enough Operational Experience Feedback data available
  - to analyse all of the significant events that actually occur,
  - and to timely implement corrective actions to prevent reoccurrence.

But The World is Real...

- Unfortunately, we fly in a real world.
- To-day's world is not Utopia.
- Among the main reasons are :
  - Culture
  - Punitive actions
  - Fear of losing face (or job)

We have to run the things differently

We have to change our minds and reporting procedures

The Operational Aspects

Proactive safety requires data

- We have very good feed-back on technical events
- We have very little feed-back on operational matters

Airbus Industrie Initiatives

- Airbus Industrie has implemented several programs to :
  - Obtain feedback on the operational incidents that occur in the real world.
  - Share “Lessons Learned”.

Data Acquisition

- The product support system has always received extensive information concerning the technical events that occur.
- An Aircrew Incident Reporting System (AIRS) was established in 1996
  - It stores operational events data
  - It classifies data for further analysis and trending, thanks to its taxonomy.
- Line Operation Management System (LOMS)
  - Continuous monitoring of flight data. (FOQA)

The Confidential Reporting System

- A Confidential Reporting System was established with the operators in 1995 to obtain sensitive information that could not be obtained through normal channels.
  - The system is a “confidential” system, it is not an “anonymous” system.
  - Anonymous systems are of limited value.
- Currently, 62 operators are participating in the system, which places more than 65 percent of the aircraft under the program.

Initial Results

- The early results from the Confidential Reporting System have shown that Airbus Industrie and operators of its aircraft :
  - Can successfully and productively share information.
  - Can and will maintain confidentiality.
  - Can learn important lessons by sharing safety information.

But, up to now, the amount of useful operational data remains small.

Data Sharing Initiatives

- Flight Safety Conferences are periodically held to share “Lessons Learned” with:
  - Operators.
  - Pilot Associations.
- A flight safety magazine, *Hangar Flying*, is published to provide important safety information to:
  - Operators.
  - Pilots.
  - Ground Engineers (Mechanics).

The Next Step Forward

- The next step forward is to encourage operators to establish an accident prevention function, if it is not currently in place.
  - Develop Standard Operating Procedures.
  - Establish the flight standards functions necessary to assure diligent adherence to commonly accepted good operating practices and procedures.
  - Implement a “Self-Audit” system.
  - Implement a DFDR information collection agreement.
  - Establish an internal Confidential Reporting System.
  - Participate in data sharing activities.

Airbus Industrie Initiatives

- Airbus Industrie has already implemented programs to support this next step.
- Airbus Industrie is supporting its operators by:
  - Developing guidelines for implementing accident prevention and flight standards programs.
  - Providing operational assistance in initially implementing these programs within airlines where they do not currently exist.
  - Providing a Flight data analysis system (LOMS)
  - Providing support in the retrieval and analysis of information obtained through DFDR information collection agreements.

The Second Step Forward

- The second step forward is to encourage the industry to establish effective methods for:
  - Sharing “Lessons Learned” between:
    - Manufacturers.
    - Operators.
    - Pilot and controller associations.
    - Regulatory authorities.
    - Investigation authorities.
  - **Providing a high level of protection to:**
    - **The people involved.**
    - **The organizations involved.**
    - **The data provided.**

Support For The Second Step

- Airbus Industrie strongly supports efforts to develop viable systems for sharing “Lessons Learned” between all elements of industry.

A Reality Check

- The Airbus Industrie experience with the Confidential Reporting System strongly suggests that the second step will fail unless:
  - We crawl before we attempt to walk.
  - And we walk before we attempt to run.

Grandiose and complex systems will surely fail

Critical Elements

- The following elements are essential to the success of any data sharing arrangement.
  - A very high level of trust must be established.
  - The system must be a confidential system.
  - Follow-up action must be possible.
    - Anonymous systems are of very limited value.
  - The system must be focused on "Lessons Learned".
    - The mountains of basic data are overwhelming.
    - Analysis is the "value added" product.
  - New laws are required to protect participants.
    - Data must not be used for commercial, legal, or political purposes.

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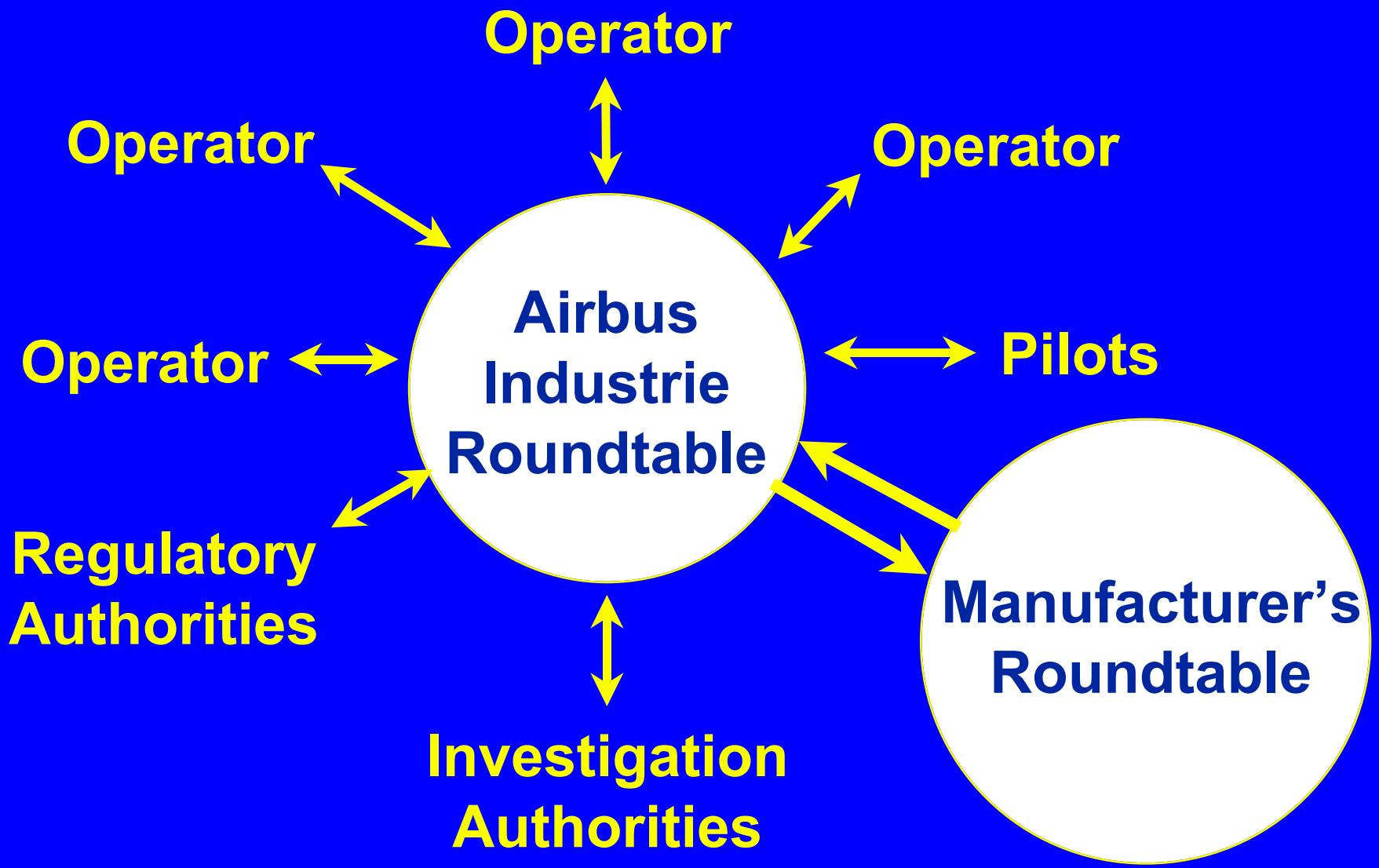
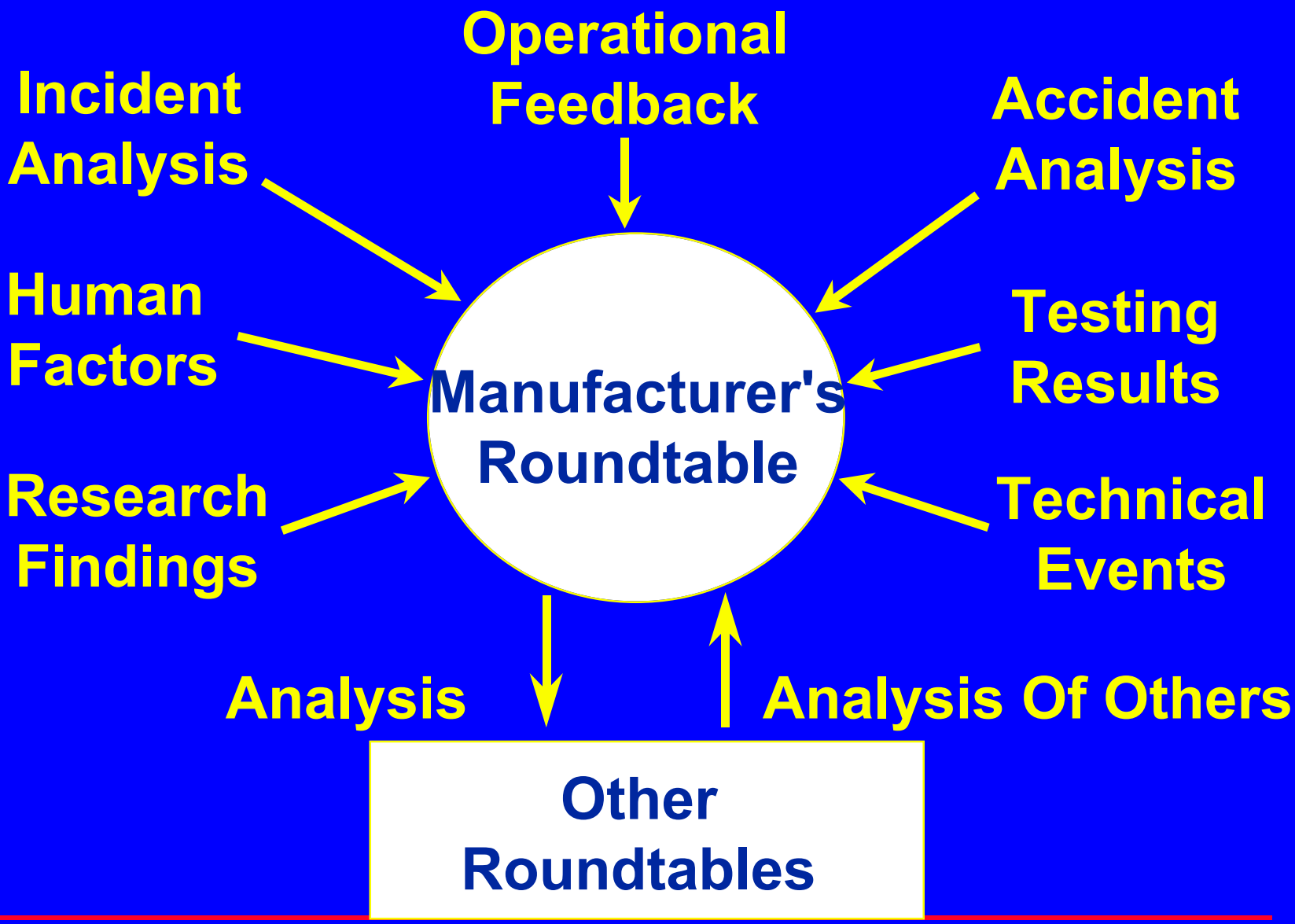
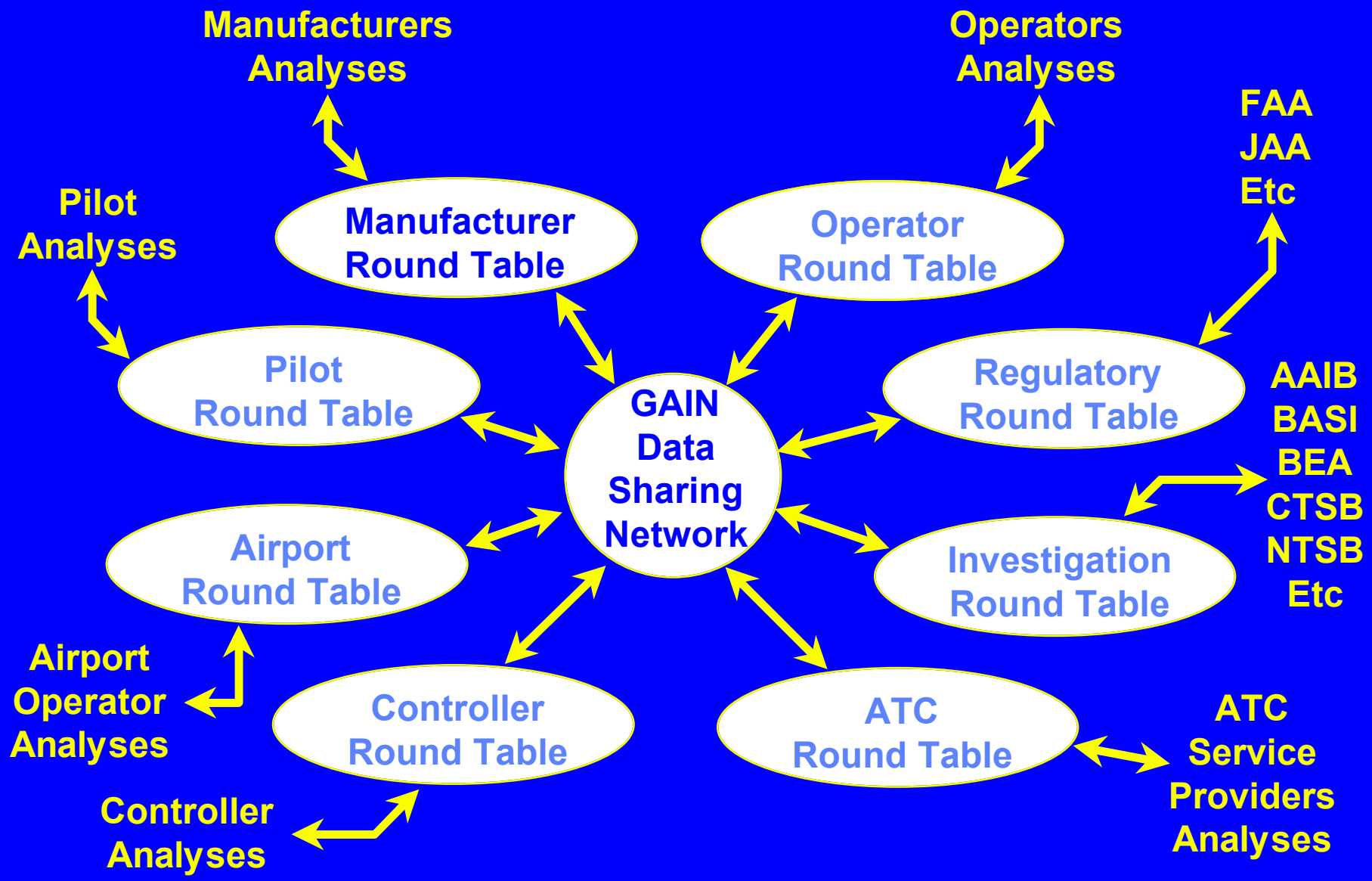
Crawl First


Operator
Operator
Operator
Operator
Airbus Industrie Roundtable
Pilots
Regulatory Authorities
Manufacturer's Roundtable
Investigation Authorities

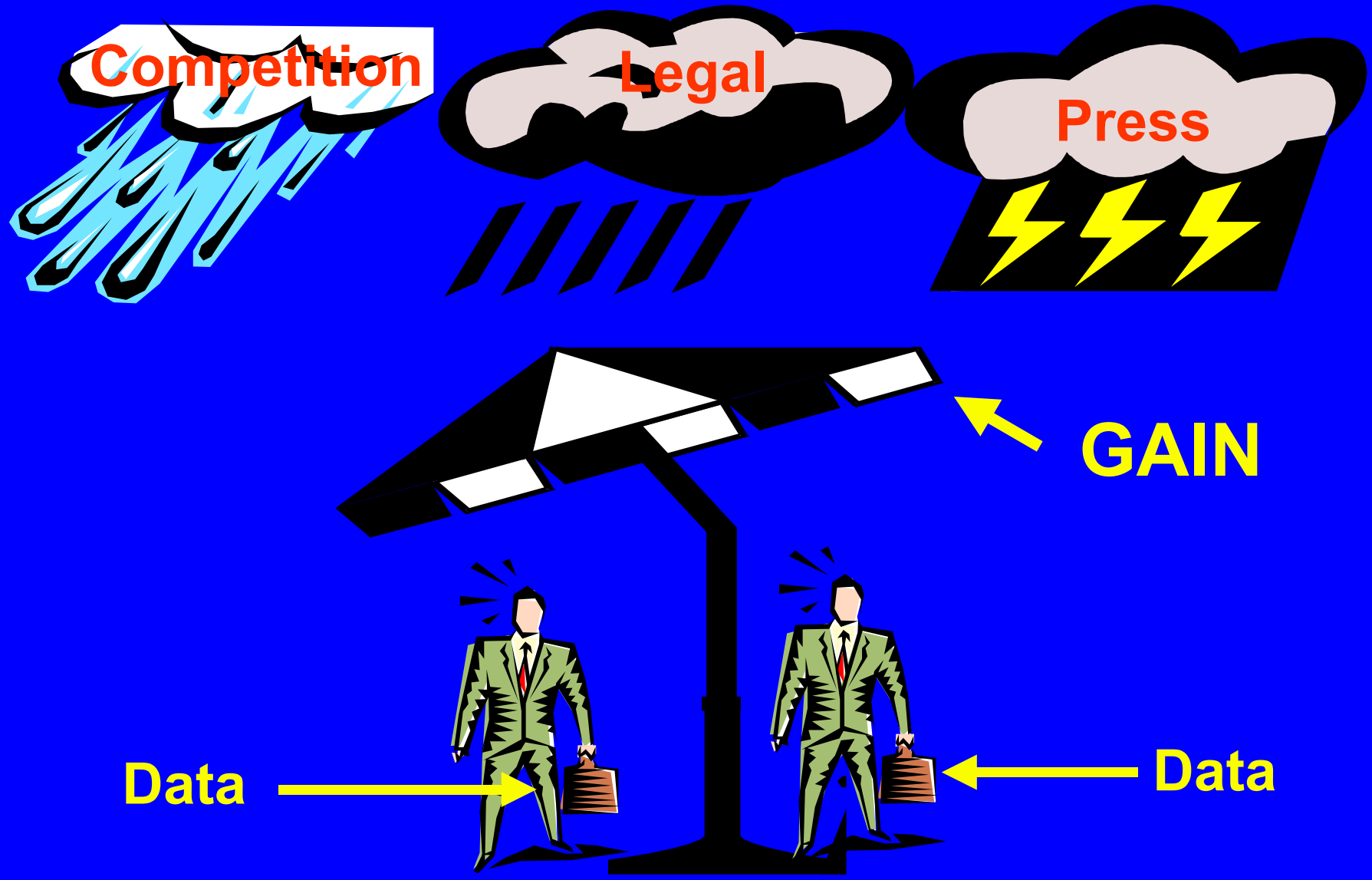
Then Walk


Operational Feedback
Incident Analysis
Accident Analysis
Human Factors
Testing Results
Manufacturer's Roundtable
Research Findings
Technical Events
Analysis
Analysis Of Others
Other Roundtables

Then Run


Manufacturers Analyses
Operators Analyses
FAA JAA Etc
Pilot Analyses
Manufacturer Round Table
Operator Round Table
Pilot Round Table
Regulatory Round Table
AAIB BASI BEA CTSB NTSB Etc
GAIN Data Sharing Network
Airport Round Table
Investigation Round Table
Airport Operator Analyses
Controller Round Table
ATC Round Table
ATC Service Providers Analyses
Controller Analyses

Our View Of GAIN



Thank You For Your Attention